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09/849,002	05/04/2001	David J. Leach, JR.	INSL0037	8971

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LAW OFFICES OF GARY R. STANFORD
330 W OVERLOOK MOUNTAIN RD
BUDA, TX 78610

EXAMINER

WILSON, ROBERT W

ART UNIT	PAPER NUMBER
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2661

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/849,002	Applicant(s) LEACH, ET AL.	
	Examiner Robert W Wilson	Art Unit 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.



**PHIRIN SAM
PRIMARY EXAMINER**

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

1.0 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2.0 Claims 1-10 & 22-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Davidson (U.S. Patent No.: 6,754,197 B1).

Referring to claim 1, Davidson teaches: Fig 5 shows a method of repetitively transmitting frames. MAC entity is defined only in the preamble and is not further defined in the limitations consequently MAC entity is for intended use and is given no weight. The HSU accepts the frames for intended transmission per Fig 5 (accepting). The frames are stored in the BIU per Fig 5 (enqueueing). The frames are dequeued from the BIU per Fig 5(dequeueing). The dequeued frame is transmitted to Memory per Fig 5 (transmitting). The applicant broadly defines “persistent frame”. If the dequeued frame failed transmission then the frame is rescheduled or reenqueued. The examiner has interpreted a frame which must be transmitted but failed to be transmitted which is rescheduled is a persistent frame (re-enqueueing)

In Addition Davidson teaches:

Regarding claim 2, destination mask per col. 5 line 17-col. 6 line 67 (mark)

Regarding claim 3, destination mask per col. 5 line 17-col. 6 line 67 is part of a transmit control field.

Regarding claim 4, transmit descriptor per col. 6 line 19 (frame type)

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Regarding claim 5, The applicant broadly claims “persistent queue”. The memory (520 per Fig 5) is a persistent queue.

Regarding claim 6, destination mask per col. 5 line 17-col. 6 line 67 (mark) & transmit descriptor per col. 6 line 19 (frame type)

Regarding claim 7, transmit descriptor per col. 6 line 19 (command) and replacing or clearing destination mask per col. 5 line 17-col. 6 line 67 is (clear mark)

Regarding claim 8, setting destination mask per col. 5 line 17-col. 6 line 67 (clearing mark)

Regarding claim 9, resetting destination mask per col. 5 line 17-col. 6 line 67 is remarking

Regarding claim 10, resetting destination mask per col. 5 line 17-col. 6 line 67 results in suppression of transmission.

Referring to claim 22, Davidson teaches: Fig 5 is a MAC device that supports transmission of a MAC frame which must be transmitted (persistent frame). The MAC device has memory (queue) per Fig 5. The HSU per Fig 5 is the transmission scheduler which is coupled to the memory (queue) per Fig 5. The HSU logic (persistence logic) determines if the frame is a MAC frame which must be transmitted but has failed to be transmitted by setting a the transmit descriptor and the destination mask per col. 5 line 16-col. 6 line 67(signal indicative). Upon change of the destination mask the MAC frame is moved in the transmission queue or requeued by the HSU (transmission rescheduler) per col. 5 line 16-col. 6 line 67.

In Addition Davidson teaches:

Regarding claim 23, packets are inserted in order of transmissions per Fig 6A or FIFO.

Regarding claim 24, Fig 6A is a persistence queue and HSU per Fig 5 has logic to dequeue the packet or MAC frame if the frame is to be sent but fails to be transmitted (persistent packet)

Regarding claim 25, the HSU per Fig 5 has logic to detect if the frame must be transmitted but fails where a frame that must be transmitted is indicated by transmit descriptor per col. 6 line 19 (frame type)

Regarding claim 26, memory per Fig 5 (queue) stored packets with frame descriptors and the queue is controlled by the HSU (frame scheduler) per Fig 5.

Regarding claim 27, the HSU per Fig 5 has persistent logic which detects the transmit descriptor or mark per col. 5 line 17-col. 6 line 67.

Regarding claim 28, the memory (queue) stores the frames with transmit descriptor and destination mask per col. 6 line 19

Regarding claim 29, the HSU per Fig 5 inherently has a frame manager which accepts the frames into the BIU. The HSU will clear the frames upon receipt of command that rests the destination mask per col. 6 line 19.

Regarding claim 30, HSU has an inherent frame manager, and inherent transmission scheduler that access the frames into the BIU (queue) the Transmission scheduler in the HSU being configured to forward the MAC frames which must be transmitted but could not be transmitted (persistent frames) are rescheduled or requeued per Fig 5.

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3.0 Claims 11-21 & 31-38 are rejected under 35 U.S.C. 102(e) as being anticipated by

Allison (U.S. Patent No.: 6,137,804).

Referring to claim 11, Allison teaches: Fig 5 teaches a method of enabling repetitive transmission of frames in a communication system. Fig 5 includes a MAC processor (scheduling entity) and transmit logic (MAC entity). The MAC processor (scheduling entity) identifies the MAC frames which must be transmitted (persistence frames). The MAC Processor sends the frames across the PCI bus (variable timing interface). The transmit logic with the transmit logic state machine (MAC entity) enqueues the frames in the storage buffer. The transmit logic with the transmit logic state machine dequeues the frame for transmission. The transmit logic and transmit logic state machine transmits the frame. However, if an underun occurs and the frame is not successfully transmitted then the MAC frame is rescheduled by re-enqueuing.

In Addition Allison teaches:

Regarding claim 12, 22 per Fig 3 (frame descriptor) and 22a per Fig 3 (parameter status field-mark)

Regarding claim 13, values are inserted in stations field (22a per Fig 3) and inserting a mark in the transmit control field.

Regarding claim 14, the applicant broadly claims persistent queue. The examiner interprets the transmit ram per 2 as the persistent queue.

Regarding claim 15, the MAC processor (scheduling entity) identifies the persistent frame based upon the frame descriptor (Fig 3)

Regarding claim 16, the MAC processor (scheduling entity) selects the frame based upon the frame descriptor (Fig 3)

Regarding claim 17, the MAC processor (scheduling entity) stores values in upon the frame descriptor (Fig 3).

Regarding claim 18, the MAC processor (scheduling entity) sends a command to locate a frame based upon the status field of the frame descriptor per Fig 3.

Regarding claim 19, the status field contains a mark per Fig 3.

Regarding claim 20, set retry bit to zero per Fig 3 and col. 4 line 59.

Regarding claim 21, reset status field to indicated persistence per Fig 3.

Referring to claim 31, Allison teaches: Figure 2 is a communication system. The MAC Processor (scheduling entity) forwards frame for transmission and identifies frames which must be transmitted as persistent frames. 34 (transceiver) is coupled to the MAC processor (scheduling entity) and Transmit RAM (queue) per Fig 2. The transmit state machine (frame manager) per col. 6 line 18-col. 8 line 42 is coupled to the MAC processor (scheduling entity) and the Transmit RAM (queue) per Fig 5. The Transmit Logic (transmission scheduler) is coupled to the Transmit RAM (Queue) and the transmit state machine (frame manager). The transmit logic (transmission scheduler) forwards frame s to the transmit logic state machine (frame scheduler).

In Addition Allison teaches:

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Regarding claim 32, the transmit logic (scheduler) includes a transmit state machine (persistence logic) which asserts frame descriptor per col. 6 line 18-col. 8 line 43 (signal indicative).

Regarding claim 33, the transmit logic (scheduler) includes a transmit state machine (persistence logic) which identifies frame descriptor per col. 6 line 18-col. 8 line 43(signal indicative).

Regarding claim 34, the MAC processor (scheduling entity) identifies the persistent frame based upon the frame descriptor (Fig 3) and marks the frame for retransmission by setting frame descriptor.

Regarding claim 35, frame descriptor is a transmit control field per Fig 3.

Regarding claim 36, the Transmit RAM is a persistent queue per Fig 2 and the MAC processor includes logic detects frame which must be transmitted (transmit scheduler).

Regarding claim 37, the MAC processor (scheduling entity). The transmit state machine rests the frame descriptor values (clear persistence mark) for a frame in the transmit RAM.

Regarding claim 38, The MAC Processor (scheduling entity) & 34 per Fig 2 (transceiver) have frames coupled over the PCI bus (variable timing interface)

Claim Rejections - 35 USC § 103

4.0 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5.0 Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Allison (U.S.

Patent No.; 6,137,804) in view of Davidson (U.S. Patent No.: 6,754,197).

Referring to Claim 39, Allison teaches: the communication system of claim 31,

Allison does not expressly call for: wherein the transceiver comprises a wireless transceiver but teaches a 802.11 wire transceiver.

Davidson teaches: a transmitter per Fig 5 which is a wireless transceiver.

It would have been obvious to one of ordinary skill in the art the time of the invention to add the wireless transceiver of Davidson in place of the wire transceiver of Allison in order to build a wireless LAN system which is just another type of LAN.

Double Patenting

6.0 A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

7.0 Claim 31 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 25, 26, & 40 of copending Application No. 09/849,101. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Referring to claim 31, application no.: 09/849,101 teaches the following limitations scheduling entity (claim 26), transceiver (claim 25), queue (claim 40) and transmission scheduler (claim 40). The additional limitations taught by application no.: 09/849,101 would be obvious.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Amendment

8.0 Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new ground(s) of rejection.

The examiner honored the applicant's request for reconsideration and has written the above rejection in response to applicant's request. It should be noted that the applicant has claimed a "persistent frame", "persistent logic" etc. in the claim language. The applicant is entitled to be their own lexicographer and invent new words; however, the applicant has not limited "persistent logic" or "persistent logic" in the claim language. The examiner reminds the

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applicant that the name of the game is the claim; consequently, the examiner has interpreted a "persistent frame" as a frame that must be transmitted which has not been successfully transmitted. The examiner further wishes to point out that on page 12 line 21 of the specification the applicant points out that certain frame types; such as polling frames, may be considered as persistent. Even the specification broadly defines a "persistent frame" in such a manner that a persistent frame could be anything; thus, "persistent logic" could also be any kind of logic.

Conclusion

9.0 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 571/272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert W Wilson
Examiner
Art Unit 2661

RWW
4/21/05



PHIRIN SAM
PRIMARY EXAMINER